

CLAIMS

Set 2

1. A label for electronics components comprising a substrate, a coded data symbol carried by the substrate, wherein the format of the symbol is such as to facilitate accommodation of the substrate on components or carriers for the components.
2. A label according to claim 1 wherein the data which is encoded as the symbol is an identifier of components or carriers.
3. A label according to claim 2 wherein data relating to components or carriers is stored in a database at a location addressable according to the identifier.
4. A label according to claim 1 wherein the format of the symbol is such that the space requirements of the substrate are less than is available on components or component carriers.
5. A label according to claim 4 wherein the symbol is in Data Matrix, MaxiCode, Code One, Aztec Code or QR Code format.
6. A label according to claim 1 wherein the symbol is in the region of $300\mu\text{m} \times 300\mu\text{m}$ or less.
7. A label according to claim 1 wherein the substrate is of the order of $460\mu\text{m} \times 460\mu\text{m}$ or less.
8. A label according to claim 1 wherein the substrate is a semiconductor wafer material.
9. A label according to claim 8 wherein the wafer material is silicon nitride

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10. A label according to claim 1 wherein an etchable layer is applied to the substrate and the symbol is etched into the etchable layer.
11. A label according to 10 claim wherein the etchable layer is gold.
12. A label according to claim 11 wherein the gold is etched so as to leave gold, bright reflective surface parts, and non-gold, darker surface parts.
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13. A label according to claim 10 wherein the etching is performed using an electron beam technique
14. A label according to claim 1 wherein the symbol is read and decoded using a vision system comprising light source means for illuminating the symbol, reflection detection means for detecting a reflected light pattern corresponding to the symbol and processing means for decoding the reflected light pattern.
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15. A label according to claim 14 wherein the light source produces diffuse red light.
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16. A label according to claim wherein the substrate is a component or component carrier substrate.
17. A method of labelling electronics components comprising attaching to the components or carriers for the components a substrate carrying a coded data symbol.
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18. A vision system for reading a coded data symbol on an electronics component label comprising means for producing light for illuminating the symbol and means for detecting the pattern of light reflected from the symbol.
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19. A vision system according to claim 18 wherein the light producing means produces diffused red light.
- 5 20. An electronics component labelling system comprising a label carrying a coded identifier symbol for attachment to a component or component carrier, a vision system for reading and decoding the label and data storage means for storing at a location identifiable according to the decoded identifier data relevant to the component.
- 10 21. An electronics component or component carrier having a label attached thereto, which label comprises a substrate, a coded data symbol carried by the substrate, wherein the format of the symbol is such as to facilitate accommodation of the substrate on the components or carrier.
- 15 22. A method of producing a label for electronics components comprising providing a substrate, providing an etchable layer on the substrate and etching the etchable layer.
- 20 23. A method according to claim 22 wherein the etching is performed using an electron beam technique.

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